

What is claimed is:

1. A hard disk system that is used as an external storage apparatus of a host device, comprising:

a hard disk unit; and

5 a conversion unit which is attachable to and detachable from said hard disk unit, wherein

said hard disk unit includes:

a hard disk for magnetically storing data;

a recording/reading section for recording and reading data to

10 and from said hard disk; and

a hard disk side interface section for having data, which is recorded on and read from said hard disk, inputted and outputted to and from said conversion unit in a first transfer format,

said conversion unit includes:

15 a host interface section for transmitting and receiving data, which is recorded on and read from said hard disk, to and from said host device in a second transfer format;

a conversion unit side interface section for having data, which is recorded on and read from said hard disk, inputted and outputted 20 to and from said hard disk unit in said first transfer format;

a transfer format conversion section for carrying out transfer format conversion between said first transfer format and said second transfer format, and for carrying out data transfer between said host interface section and said conversion unit side interface; and

25 a power source section,

said hard disk side interface section and said conversion unit side interface are, when said hard disk unit and said conversion unit are connected, made capable of transferring data between each other, and

30 said power source section supplies power to each section of said conversion unit when said hard disk unit and said conversion unit are connected.

2. The hard disk system according to claim 1, wherein
said conversion unit has a first terminal connected to a power line of
said host interface section and a second terminal connected to a power line
of said conversion unit, and
a connection line, which connects said first terminal and said second
terminal when said conversion unit is connected, is provided in said hard
disk unit.
- 10 3. The hard disk system according to claim 1, wherein
said conversion unit has a DC input terminal to which direct current
power is inputted from an external power source, and
said power source section supplies said direct current power
inputted from said DC input terminal to said hard disk unit.
- 15 4. A hard disk system that is used as an external storage apparatus of a
host device, comprising:
a hard disk unit; and
a conversion unit which is attachable to and detachable from said
hard disk unit, wherein
said hard disk unit includes:
a hard disk for magnetically storing data;
a recording/reading section for recording and reading data to
and from said hard disk; and
25 a hard disk side interface section for having data, which is
recorded on and read from said hard disk, inputted and outputted to and
from said conversion unit in a first transfer format,
said conversion unit includes:
a host interface section for transmitting and receiving data,
30 which is recorded on and read from said hard disk, to and from said host
device in a second transfer format;

a conversion unit side interface section for having the data, which is recorded on and read from said hard disk, inputted and outputted to and from said hard disk unit in said first transfer format;

5 a transfer format conversion section for carrying out transfer format conversion between said first transfer format and said second transfer format, and for carrying out data transfer between said host interface section and said conversion unit side interface;

a power source section; and

a secondary battery,

10 said hard disk side interface section and said conversion unit side interface are, when said hard disk unit and said conversion unit are connected, made capable of transferring data between each other, and

15 when said hard disk unit and said conversion unit are connected, said power source section supplies combined power of power of a power line of said host interface section and power of said secondary battery to said hard disk unit.

5. The hard disk system according to claim 4, wherein said power source section supplies power to each section of said conversion unit when
20 said hard disk unit and said conversion unit are connected.

6. The hard disk system according to claim 5, wherein
said conversion unit includes a first terminal connected to said power line of said host interface section and a second terminal connected to
25 a power line of the conversion unit, and

a connection line, which connects said first terminal and said second terminal when said conversion unit is connected, is provided in said hard disk unit.

30 7. The hard disk system according to claim 4, wherein
said power source section includes a voltage generating circuit for

generating a stable voltage regardless of load, and

 said voltage generating circuit generates a voltage based on said combined power, and supplies the generated voltage to said hard disk unit.

- 5 8. The hard disk system according to claim 7, wherein
 said conversion unit includes a DC input terminal to which direct
 current power from an external power source is inputted, and
 said power source section
 supplies the direct current power, which is inputted from
10 said DC input terminal, to said voltage generating circuit when in a first
 mode in which the direct current power is inputted from said DC input
 terminal, and
 supplies the combined electric power of the power of said
 power line of said host interface section and the power of said secondary
15 battery to said voltage generating circuit when in a second mode in which
 the direct current power is not inputted from said DC input terminal.
9. The hard disk system according to claim 8, wherein, when in said
 first mode, said power source section supplies the direct current power
20 inputted from said DC input terminal to said secondary battery and charges
 said secondary battery.
10. The hard disk system according to claim 4, wherein
 said conversion unit includes a temperature sensor for detecting the
25 temperature of said secondary battery, and
 said power source section does not charge said secondary battery if
 the temperature of said secondary battery detected by said temperature
 sensor becomes higher than a predetermined temperature.
- 30 11. The hard disk system according to claim 4, wherein
 said conversion unit includes a temperature sensor for detecting the

temperature of said secondary battery, and

 said power source section stops supplying power to said hard disk unit if the temperature of said secondary battery detected by said temperature sensor becomes higher than a predetermined temperature.

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12. The hard disk system according to claim 11, wherein said power source section detects a point in time when data transfer is not performed between said host device and said hard disk unit, and stops supplying power to said hard disk unit at said point.

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13. The hard disk system according to claim 7, wherein
 said conversion unit has a capacity detector for detecting the power capacity of said secondary battery, and

15 said power source section sends a warning to said host device through said host interface section if the capacity detected by said capacity detector falls below a first value.

20 14. The hard disk system according to claim 13, wherein said power source section stops supplying power to said hard disk unit at a time when data transfer is not performed between said host device and said hard disk unit if the capacity detected by said capacity detector falls below a second value that is smaller than said first value.

25 15. The hard disk system according to claim 14, wherein said power source section detects a point in time when data transfer is not performed between said host device and said hard disk unit, and stops supplying power to said hard disk unit at said point.